

RMSF and Other Insect and Animal Borne Diseases Statewide Workshop

Wyndham Garden Phoenix Midtown
Phoenix, Arizona
February 4, 2015

8:00 – 9:15 am Continental Breakfast & Registration

Continental Breakfast, Refreshment Breaks, and Meeting Room sponsored by [ITCA and ADHS](#)

9:15 – 9:30 am Welcome, Blessing, & Opening Comments

- I. Welcome by Erica Weis, ITCA and Hayley Yaglom, ADHS
- II. Blessing by Glenda Davis, Navajo Nation
- III. Group Introductions, [71 participants](#)
- IV. There will be a website created for this workshop with presentations and meeting information.

9:30 – 9:55 am RMSF Health Education Curriculum

The RMSF Curriculum designed specifically for children (grades 3-5 but lessons can be altered to younger or older audiences) that align with the Department of Education science and health education standards. The curriculum focuses on prevention methods for RMSF and the ability to communicate these methods to peers. Lesson plan, worksheets, and curriculum presentation will be provided. ADHS can provide some materials (bookmarks and calendars) for the lessons. A student and teacher evaluation component is included to ensure appropriateness of the lessons and to assess learning outcomes.

ADHS

Trisia Shannon, Public Health Associate

ADHS

Hayley Yaglom, RMSF Epidemiologist

9:55 – 10:20 am Break

10:20 – 10:30 am Interactive Clicker Questions & Polls

[69% \(40\) tribal affiliations](#)

[9% \(5\) ADHS, I.H.S., County](#)

[2 ITCA](#)

[1 Other](#)

[This was the first statewide meeting with all RMSF partners and stakeholders for ~65% of the workshop attendees. ~30% had previously participated in RMSF statewide meetings.](#)

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25 (45%) responded that their tribe/county holds regular RMSF coalition or task force meetings.

Reminder to inform ADHS/ITCA/CDC of these meetings if you would like us to participate in them.

10:30 – 10:35 am

RMSF Health Education Curriculum

Implementation & Evaluation

Implementing the curriculum is very flexible and can be adapted to suit the needs of students and teachers. Creativity is encouraged. The curriculum includes a pre- and post- assessment for students and their knowledge on RMSF, and teachers record those answers on the teacher survey. The student and teacher evaluation component is included to ensure appropriateness of the lessons and to assess learning outcomes. The RMSF curriculum is one method to standardize education to children since they are the most affected population. Evaluations can be sent back to ADHS. This is important because RMSF is the same disease regardless of reservation. It is also important to know what our partners are doing so that we can share best practices and resources.

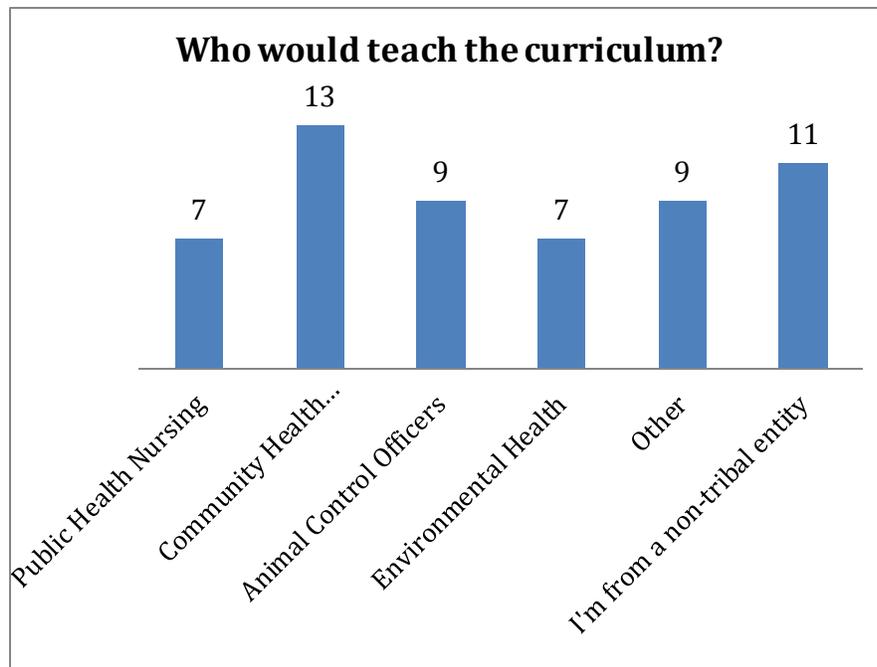
ADHS

Hayley Yaglom, RMSF Epidemiologist

RMSF Health Education Clicker Questions

63% (34) would teach or partner with schools to teach the curriculum in their community.

73% (40) felt they had all necessary tools and resources to implement the curriculum.



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10:30 – 11:30 am

Evaluating the RMSF Curriculum: Pre- & Post- Tests

Pre-Post Tests are tests given before and after training. It is used to measure what people learn during a training session. You should you exact same questions on pre- and post-tests in order to measure an increase in knowledge. Since the RMSF Health Education Curriculum is new, Pre-Post Tests will evaluate if it is effective and show if students are learning the lessons given and will help us improve curriculum.

Template has been created to assist in data management.

ITCA

Erica Weis, Epidemiologist

11:30 am – 12:10 pm

Comments on the RMSF Curriculum

At the end of the presentation, participants asked questions and provided feedback on the curriculum (flip charts/posters vs. PowerPoint; targeting after school and summer programs; including animation). The participants split into small groups to continue discussion and suggestions:

- Glenda Davis from Navajo Nation suggested adding “ask an adult for help” to the slide on removing a tick. Also explained that 2015 is “RMSF for the Youth” for Navajo Nation. There is a Navajo Education board and Task Force with different individuals doing different things relating to educational campaigns. Navajo CHR/PHN/Health Educators could use what ADHS provides as a basis.
- Ralph Jones, Gila River Indian Community, expressed it is sometimes a challenge/barrier to get into the schools. Teachers do not have time and have to teach their own curriculum.
- Question from Daniel Hoyt, GRIC to explain further how standardization is anticipated? Will this curriculum be in a series?
- Include animation* or PowerPoint preloaded on computer so kids can take home to watch
- Outside the classroom- talk to children at health fairs with interactive booth (looking at ticks under microscope, life cycle of a tick, dry ice/white blanket activity)
- Pre-Post Tests too easy; add more questions that align with objectives
- Include statistics
- Keep in mind the short attention span of children, gauge education level
- More interactive, visual props
- Kids relate to/enjoy seeing engorged tick, or ticks in vials
- Present the education to school board and parents
- DVD, stop and play it and have a discussion with students
- Maybe for 5th graders flip-chart is better
- Monthly veterinarian visits (San Carlos) with a doll to remove ticks

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- Be sure to emphasize the other ways ticks can latch onto children (running through grass, carpet), other habitats shown on posters, risk during summer seasons
- Mass canvassing in neighborhoods
- Health messages on TVs in waiting rooms (Rodrigo Villar, I.H.S.)
- For Pre-Post, make multiple choice with visuals (comparing a tick and spider)
- For tick remove activity, use pins as ticks and remove with tweezers
- Show children pregnant female tick (impresses kids how many eggs a female tick can hold), tick props or puppets?
- Commercial with health messages (catchy song), videos, song
- Ticks in vials in different stages, plush dolls, stuffed dogs with fake ticks
- Emphasize being a responsible pet owner (include topics such as spay and neutering, feeding, bathing, vaccinations)
- Seek a “stamp of approval” from appropriate channels so teachers can easily implement
- Using workbook with the curriculum (hands-on)
- Language translation (oral traditions- story telling i.e. from a dog’s point of view)
- Using ways to incorporate health messaging to smartphones (Dan Hoyt—apps and games)
 - STEM Programs are teaching students computer programming and coding
 - Approach those classes with a project related to RMSF
- Commercials (60 sec)- reach out to college or community college AV classes
- Cards/posters with drawings at the top, different stages of the ticks below in real size, then utilize hands-on activities. Give a basic lesson, lots of topics.
- Tick mascot, “superhero”
- Hands-on education, work stations, curriculum in that type of format may be better
- Have a clean-up day
- Curriculum needs to be modifiable for different types of programs and schools
- Fleurette Brown, I.H.S. asked about jurisdictional boundaries for this curriculum. It was developed to be used throughout Arizona tribal communities across the state, and discussions for disseminating it outside Arizona has not yet been discussed.

*Many participants discussed animation. PowToon (<http://www.powtoon.com/>) is a website used by ADHS to create animated videos.

Goal: reach out to one or two schools on trying out the curriculum and bring the comments back to Erica, Hayley, and Trisia. ADHS will revise based on comments and discuss with Health Education Workgroup.

ITCA

Erica Weis, Epidemiologist

ADHS

Hayley Yaglom, RMSF Epidemiologist

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12:10 – 12:30 pm

RMSF Health Education Workgroup

Bi-monthly call to discuss updates from tribal partners on health education activities with the tribes. Tribes can bring up any health education material needs they need from ADHS or CDC. Goal of the group is to discuss successes and drawbacks on what is and is not working with health education and collaborate on ways to make educating work for each unique population.

ADHS

Hayley Yaglom, RMSF Epidemiologist

12:30 – 1:30 pm

Networking Lunch

1:30 – 1:30 pm

Updates from Tribal Partners and ITCA

Cooper (Nehemiah) Joplin, RMSF Control Officer-White Mountain Apache Tribe

Works with CHR's at Health Fairs, school presentations (give Kick Tick brochures), Boys and Girls Clubs, public events, first dog collaring campaign, homeowner education, talk shows on local radio (English and Apache) on how to get tick collars, referrals to spray homes (pesticide campaign), almost weekly doing public events, created calendar (art contest—3rd graders), pencils with contact information, presentation with CHR doing tick removal activity, emphasize daily tick checks. In 2014, WMAT did a Seresto dog collar campaign. Follow-up with dogs and homeowners that called about tick collars falling off. In 2015, goal is to get animal control program completed. Ordered cages and restraint equipment. Will have a campaign in March for spay/neuter and pesticide spraying homes.

Harty Bendle, Animal Control & Epidemiology Program- San Carlos Apache Tribe

15 confirmed and probable cases in 2013, 3 in 2014, 75% decrease! But A LOT of suspected cases without follow-up.

Provide animal control services and pesticide application, Apply to approximately 3000 structures, 2012 to 2013 completed San Carlos-Peridot Rodeo project- teach homeowners how to apply pesticide, educate on RMSF, teach about pet care, many presentations preschool-high school, discussed effectiveness of flip charts for 5th grade and younger, 8th grade and older enjoy PowerPoint, elders luncheons, 2014: 2 dog collaring campaigns. March 2014 collared 1000 dogs, in September 2014 collared 800 dogs. Use liquid pesticide not granules, SCAT has 4 ATV's with 30 gallon tanks for spraying. 2015: campaigns, RAVS wellness clinic and spay/neuter clinic. SCAT plans to continue cases through 2015. Maybe begin a RAVS/Pet's for Life pilot project with monthly veterinarian visits.

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Eva Ybarra, Tohono O'odham Nation

2013: 10 confirmed, 35 suspect; 2014: 0 confirmed

Participated in integrated pest management and presented at several community meetings to a wide range of audiences, switched over to liquid granules (easier and cost-effective), district is now purchasing Seresto collars and liquid granules for their community, TON has animal control ordinance (2 dogs or fine) worked with legislative reps and council for support, attribute large decrease in education and showing community how to do things. Visited with SCAT for advice on RMSF response. In Southern AZ, it is always tick season and dogs cross over the border a lot. Districts are buying pesticides and collars for each village this year to alleviate burden on health department. I.H.S helps with rabies vaccination clinics. Goal is to promote responsible pet ownership.

Adolf Robles, Animal Control Program Gila River Indian Community

GRIC functions a bit differently and does not work a lot with I.H.S. for RMSF efforts. GRIC works via referrals. Lots of field work throughout the year (pesticide application), spray yards and educate, trying to work to do education with organizations like Boys and Girls Club, offering year around tick control, chewable and topical 30 day tick control, promote owner responsibility for pets, 1996 animal control ordinance (limit 4 dogs). Individual gets fined \$500 if over limit=doggy ticket. Need a permit to have more than 4 dogs, but have to prove responsible ownership (vaccinations, spay/neuter, license). Shelter impounds unwanted animals.

Getting into schools is challenging, GRIC attends community meetings BUT it seems to be the same people every year attending. Animal control offers some veterinary services, such as vaccinations, year round. Collars have not been very successful on GRIC; always falling off. Trying NexGuard which is a chewable tick control and last 30 days. GRIC had 4 suspect human cases in 2014. In 2009, there was a confirmed human case. Serosurvey in dogs showed presence of RMSF, but also co-infection with ehrlichiosis.

Glenda Davis, NNVL Navajo Nation (PPT Attached)

2012 activated foreign animal disease task force, 2012 CDC Epi-Aid Canine Serology (determined Navajo Nation has prevalence of RMSF), Emergency funding (allows funding for mobile clinic and spay/neuter services), 5 CDC RMSF prevention tasks (enhance, educate, outreach, encourage, control), dog and cat vaccinations, for 2015 there are 51 sites for wellness and spay/neuter services, "2015 Year of RMSF Education for the Youth," billboard competition motto: Take a Bite on Ticks, Before They Take a Bite on You," high volume surgeons \$500/day, offering mobile unit during winter months. Bring "Big Tess" South. 2015 will be 4th RMSF season.

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Pamela Lalo, Veterinary Technician, Hopi Tribe

CHRs and PHN educate, go out to educate school aged children, spay/neuter once a week, 2015 working on a snap test for RMSF with ABAXIS. Villages on Hopi do a lot of the spraying. There are collaring campaigns and 2X/year spay/neuter clinics to promote good pet care.

Erica Weis, Epidemiologist and Travis, Assistant Director, ITCA

Advocacy and education, non-profit (Epi) and political arm (legislative). In December 2013, one of the actions requested from the statewide RMSF group was that ITCA look at ways the 5-year funding plan to make all tribes have enough resources. Currently running ion emergency funding, which is not sustainable. ITCA established by tribes for tribes to address things that are affected by tribes collectively and individually. RMSF affects all. ITCA has a non-profit side and the political side of ITCA. Political side talks about legislative issues around nation. Takes action on things through resolution. Want to highlight this issue and advocate for issues affecting tribes.

Erica drafted resolution to get support from tribal elected leaders (advocacy work on behalf of the tribe), finding sustainable (not emergency) funding, took resolution to leaders in DC to educate, figuring out what agency is responsible for funding, encouraging speaking to elected officials to raise awareness in DC, personal stories help when communicating to DC leaders. Elected officials weren't aware that this was still an issue. Which part of the government is supposed to fund this? Currently, there is a jurisdiction gap. Trying to figure out how the money gets to IHS then to ITCA and then to tribes. Tribes can't access funding from CDC to address issue. Part of advocacy – elevate to national level, present to DHHS. Met with AZ congressional delegate in August to see how this can get funded. NCAI publish an annual budget request manual/book and RMSF should be included in budget book. Efforts still lie in educating elected officials. Tribes should talk to leaders and have them raise it in DC. Personal stories are effective (elders, children being affected).

Yavapai Apache Nation

Held rabies vaccination clinic and did door to door RMSF education in 2 communities. Conducted serosurvey on dogs to check for potential threat of RMSF, but all were negative. Would like to continue, but need updated brochures.

Mare Schumacher, Epidemiologist, Coconino County Public Health Services District

Educating parents on tick-borne relapsing fever in response to an episode, prevention messages.

2:30 – 2:45 pm

Break

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2:30 – 3:50 pm

RMSF Statewide Plan Discussion

Fourth statewide meeting in 2012. Comprehensive plan. The Statewide Plan would be made available to tribes and adaptable to fit each tribe. The advocacy component shows congressional groups the plan. No Statewide meeting in 2014. Purpose of handbook are to provide an epidemiological and historical background of RMSF in Arizona, present a sustainable framework for human case surveillance, and outline response strategies to protect tribal lands and work to eradicate the disease. The handbook also includes RMSF best practices and recommendations that each tribal and local public health entities can use to form to develop their own protocols. Five workgroups: environmental health, community outreach, healthcare, animal control and vet programs, finance and budget. Key pieces of plan:

- Provide epidemiological and historical background of RMSF
- Present a sustainable framework for human case surveillance
- Outline response strategies to protect tribal lands and work to eradicate RMS
- Achieve enhanced communication and collaboration between partners and stakeholders
- Provide an understanding of past and present burden of RMSF and mechanisms to reduce burden
- What makes RMSF in AZ different – 5 characteristics
- Important to come back for second titer (2 blood tests) – San Carlos Apache Tribe had an incentive for people to come back. Future discussion on how to get individuals back for 2nd titer. R. Villar explained need for 2nd titers.
- Tips for RMSF Case investigation
- Glenda Davis, NN: tribes through the 5 years are building infrastructure to support initiatives. Who in the tribes would be doing budget documents?
- Not just a tribal problem, it's an AZ problem

ADHS

Michael Allison, Native American Liaison

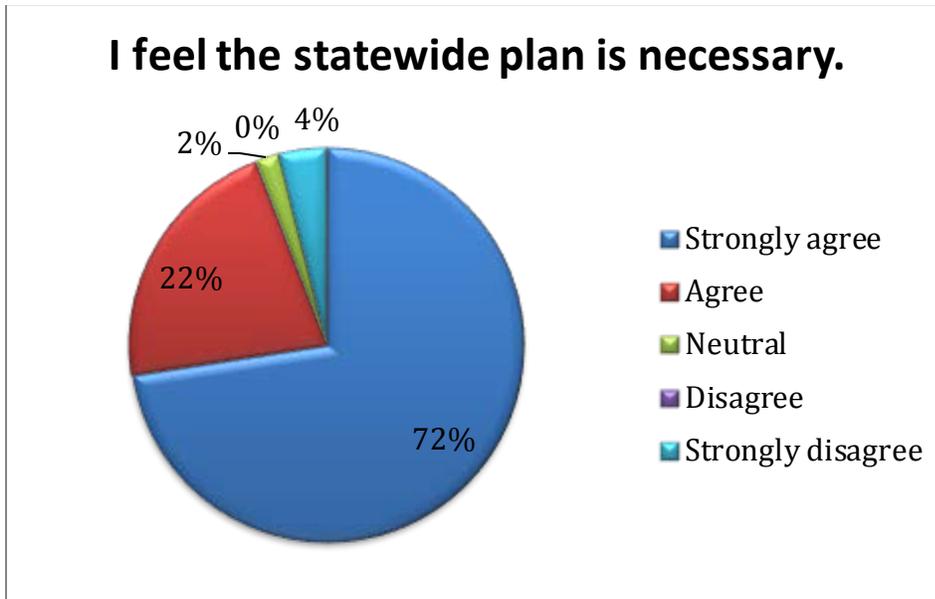
ADHS

Hayley Yaglom, RMSF Epidemiologist

RMSF Statewide Plan Clicker Questions

60% (30) strongly agreed that they understood the purpose of the statewide plan and 28% (14) agreed that they understood the purpose.

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78% (43) felt it would be beneficial to start up coalition meetings again.

Primary coalition committee involvement:

Animal control—34% (17)
Health care—26% (13)
Community education—24% (12)
Environmental control—10% (5)
Budget & finance—6% (3)

Secondary coalition committee involvement:

Community education—34% (17)
Environmental control—26% (13)
Animal control—18% (9)
Health care—18% (9)
Budget & finance—4% (2)

~65% (35) were interested in a biannual RMSFR call between all partners and stakeholders.

~71% (36) understood the purpose of the transfer protocol.

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2:30 – 3:50 pm

Preparing for Tick Season

Provided a few slides with a tick overview, life cycle, recommendations for prevention (try to reach new groups in new ways), and technical assistance from ADHS (educational materials, potential financial assistance for collars and pesticides, assistance during campaigns, annual case counts/data, and knowledge and expertise). Special thanks to Naomi Drexler, MPH (Epidemiologist @ CDC).

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9:15 – 9:30 am Welcome, Blessing, & Opening Comments

- I. Housekeeping
- II. Save the Date: Epidemiology Working Group (March 10, 2015 8:30am-5:30pm)- will help guide what ITCA will be doing next 5 years
- III. Blessing by Glenda Davis, Navajo Nation
- IV. Group Introductions, [69 participants](#)

9:30 – 10:15 am Mosquito-borne Diseases Update

Different arboviral diseases that are present in the Arizona environment are West Nile Virus (WNV), St. Louis encephalitis, Dengue, and Chikungunya. *Culex* mosquitoes host WNV and St. Louis encephalitis); *Aedes aegypti* can spread dengue and chikungunya. This presentation provides situational awareness on current outbreaks, clinical manifestations and symptoms, case rates, surveillance, and control methods. ADHS is planning the Statewide Plan for emerging arboviral threats. ADHS Vector and Zoonotic Disease Program is available for prevention education and technical assistance. Locally transmitted cases in the US have been contained (chikungunya). If people are trapping *Aedes* mosquitoes, let ADHS know.

ADHS Lydia Plante, Vector-borne and Zoonotic Disease Epidemiologist

10:15 – 10:30 am Break and Group Photo

10:30 – 11:10 am Zoonotic Diseases Update

This presentation focuses on rabies, tick-borne relapsing fever, Hantavirus, *Onchocerca lupi* (first case in US found in AZ). This presentation provides situational awareness on recent outbreaks, background of these animal-borne diseases, vaccinations, and treatment recommendations. If cases of *onchocera lupi* are found, notify public health and seek consultation for treatment. State or local public health can investigate the origin and travel history of the infected dog in order to identify high-risk areas.

CDC/ADHS Dr. Laura Adams, Career Epidemiology Field Officer

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Discussion/Questions from Mosquito & Zoonotic Disease Updates

1. Susan Gale, Asst. State Veterinarian: which serotypes of dengue are being seen in this outbreak? **Serotype 1 and 2**
2. Rodrigo Vilar, MD, I.H.S.: Are increasing rates of new diseases in communities a concern? **Lydia commented that yes, but it is not just the rates of disease. It is the expansion and spacial spread to new areas.**
3. Ralph Jones, GRIC EH: What are the factors leading to spread? **Socioeconomic factors/differences as well as home structures could be an influencing factor on increased Aedes presence.**
4. Dan Hoyt, GRIC EH: Distribution across Arizona? How is data being collected and represented? **States encourage tribal and local vector control to do own surveillance, but there is variability in which areas are already doing surveillance. Craig Levy commented that traps currently used for WNV/Culex spp. Are being used and that only catches the tip of Aedes iceberg.**
5. Mistin Ray, PHX I.H.S.: If WNV trapping is occurring, should that be reported to the state? **Yes!**
6. Glenda Davis, NNLVP, Has pooling and trapping discontinued? **NO!**
7. Comments on using gambusia fish, a natural mosquito killer for large bodies of water, but Craig Levy, Maricopa County Epi, said it needs to be in an environment without spillover because these fish are NOT native.
8. Rodrigo Vilar, MD, I.H.S.: What is the role of the oral vaccination for rabies in skunks? **Laura Adams explained that the oral vaccine is very effective for raccoons, but not so much for skunks.**
9. What causes the relapse in illness for TBRF? **It is caused by a change in antigenic shift in the bacteria. The relapse can occur 4-10 times if not treated.**
10. Eva Ybarra asked about TBRF in dogs. **Limited evidence, but one recent study identified a case.**

10:30 – 11:10 am

Environmental Health/Pesticide Applicator Program

ITCA Pesticide Enforcement and Worker Safety Program provides technical assistance and training to Tribal Pesticide Programs in AZ. They also coordinate pesticide inspector and pesticide safety/label reading trainings. ITCA Pesticide Program can also provide and develop outreach material in both English and Spanish, implement Integrated Pest Management (IPM) Practices in schools, and conduct Train-the-Trainer trainings in Spanish. ITCA participates in tribal technical resource work groups. Their '15-'17 work plans include providing oversight and technical assistance to tribes with coordination agreements and member tribes, assist tribes in implementing IPM practices, assist in conducting agricultural and non-agricultural inspection, provide training pertaining to pesticide and worker safety training, review and comment newly developed or implemented policies and regulations regarding FIFRA laws.

ITCA

Africa Dorame-Avalos, Pesticide Program Environmental Specialist

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11:30 am - 12:30 pm Networking Lunch

12:30 - 1:00 pm Geographic Information Systems (GIS)

GIS provides power visual aids that capture spatial and geographic data. ITCA can provide site suitability analysis. GIS and epidemiology can help public health locate the source of an outbreak (John Snow example). GIS maps can illustrate trends (West Nile case count example). ITCA can provide GIS training (upon request), technical assistance to build internal capacity, customized mapping, and data creation. Bureau of Indian Affairs (BIA) can provide free licensing to ArcGIS software.

ITCA

Jonathan Davis, GIS Fellow

1:00 - 4:00 pm Breakout Groups, Facilitated Discussions by Region

See attached